

Ser.no. 10/073,991
Amdt dated November 27, 2003
In Reply to Office Action dated July 2, 2003

Amendments to the Specification:

Please replace paragraph [0007] with the following rewritten paragraph:

— A typical folded-fin heat sink assembly comprises a base plate and a folded-fin assembly mounted on top of the base plate, the folded-fin assembly having a plurality of joined folded-fins extending upwardly from the base plate. A shroud may also be provided surrounding a substantial portion of the folded-fin assembly. The folded-fin assembly is produced by feeding strip aluminum or copper material through a set of blades which are actuated through cam action to produce its accordion-like structure, having a lower web, an upwardly extending fin portion, an upper web, a downwardly extending fin portion, and so on, repeating in a progressive zig-zag fashion. —

Please replace paragraph [0012] with the following rewritten paragraph:

— It is therefore desirable to provide a process for bonding the aluminum fins to the copper base plate in which low thermal resistance levels can be achieved within the joint encompassing the bonded elements by utilizing good solder joint practices such as i) the soldering of a flexible (folded fin) element to an inflexible (copper plate) element in order to provide for good flatness control, and ii) providing regular gaps between adjacent elements to enable the even flow of excess solder in the liquidus state, such that the extent of solder material between the elements can be minimized for a superior thermal conduction path, and iii) provide a healthy meniscus curve solder joint between gaps to provide structural strength and facilitate enhanced thermal conductive paths to the individual fin elements], which process provides adequate thermal heat conductivity levels between the bonded elements to avoid reducing the thermal performance of the heat sink, and which avoids the necessity of using any intermediary process steps]. —

Please replace paragraph [0021] with the following rewritten paragraph:

— Preferred embodiments of the invention will now be described, by way of example only, with reference to the attached Figure 1, which is an exploded view of an assembled heat sink, and Figure 2, which is a magnified view of the soldered joint between the folded fin and copper base plate. —

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Please replace paragraph [0025] with the following rewritten paragraph:

— The solder strips 4 are of a unique tin/zinc (Sn/Zn) solder and are placed on the base plate, as described above. The application surface is lightly fluxed using a suitable fluxing compound such as Formula 2600 (trade-mark) sold by Kester Solder, 515 East Touhy Ave., Des Plaines, Illinois, and the fins are then placed on top of the copper base and solder. The assembly is then processed at a temperature typically in the range of 220-260EC, depending on the part size and shape, which exceeds the liquidus temperature of the solder composition, following which the assembly is allowed to cool in order to form the soldered joint. Figure 2 is a cross-sectional view of the proposed desired solder joint possessing the desirable thermal joint attributes noted in paragraph [0012]. --